

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1.-9. (Cancelled).

10. (Previously Presented) A timing device, comprising:

an antenna being configured to receive electromagnetic waves;

a communication unit to communicate with an external communication device via the antenna, the communication unit having a receiving unit receiving time information at a specific cycle from the outside via the antenna, and a current time counter unit sequentially updating the current time information using the time corresponding to the time information received by the receiving unit as a reference; and

a drive unit having a piezoelectric actuator that oscillates according to a signal from the communication unit, and a mechanical structure designed to be driven by the piezoelectric actuator and provided with a time display unit displaying time information, the mechanical structure displaying the time information on the time display unit on the basis of the current time information from the current time counter unit, the time display unit being operable while the electromagnetic waves are being received.

11. (Cancelled).

12. (Previously Presented) The timing device according to claim 10,
wherein
the mechanical structure further has a rotor, and
the piezoelectric actuator is configured so as to drive rotatably the rotor by elliptical
movement resulting from a combination of longitudinal oscillation and curved oscillation.

13. (Previously Presented) The timing device according to claim 10,
wherein
the piezoelectric actuator comprises an oscillating plate having a plate-shaped
piezoelectric element and a reinforcing plate stacked on the piezoelectric element, a contact
section provided to the longitudinal tip of the oscillating plate, a support member, and a
holding section to hold the oscillating plate on the support member, and
the contact section is disposed at a location in which a rotor of the mechanical
structure is driven by displacement resulting from the oscillation of the piezoelectric element.

14. (Previously Presented) The timing device according to claim 10,
wherein
the time display unit comprises pointers to display time information and a pointer
driving actuator to drive the pointers, and

the antenna is disposed at a location in which the positive projection of the antenna on a plane perpendicular to the thickness direction of the timing device does not overlap the positive projection of the pointer driving piezoelectric actuator on the plane, and is also disposed to be separated by a specific distance in a direction perpendicular to the thickness direction.

15. (Withdrawn and Previously Presented) The timing device according to claim 10, wherein

the time display unit comprises pointers to display the time information and a pointer driving actuator to drive the pointers, and

the antenna is disposed at a location in which at least part of the positive projection of the antenna on a plane perpendicular to the thickness direction of the timing device overlaps the positive projection of the pointer driving piezoelectric actuator on the plane, and is also disposed to be separated by a specific distance in a direction perpendicular to the thickness direction.

16.-17. (Cancelled).

18. (Previously Presented) A timing device, comprising:
communication means for communicating with an external communication device,
the communication means having receiving means for receiving time information at a

specific cycle from the outside via an antenna, and current time counter means sequentially updating the current time information using the time corresponding to the time information received by the receiving means as a reference; and

time display means provided with a piezoelectric actuator that vibrates according to signals from the communication means, and designed for displaying the time, the time display means displaying the time information on the time display means on the basis of the current time information from the current time counter means, the time display means being operable while the time information is being received by the receiving means.

19. (Previously Presented) A method for controlling a timing device, comprising:

a preparation step for preparing a timing device comprising an antenna, a control unit, a piezoelectric actuator, and a mechanical structure having a time display unit;

a time display step in which the control unit drives the piezoelectric actuator, the piezoelectric actuator operates the mechanical structure, and the time is displayed on the time display unit;

a communication step in which the control unit communicates with an external communication device at a specific cycle via an antenna in conjunction with the time display step and a current time counter unit of the control unit sequentially updates the current time information using the time corresponding to the time information received by the control unit as a standard; and

a correction step in which the time displayed on the time display unit is corrected on the basis of the current time information from the current time counter unit, the time display unit being operable during the communication step.

20. (Cancelled).

21. (Previously Presented) A method for controlling a timing device, comprising:

a preparation step to prepare a timing device comprising a control unit having a receiving unit and current time counter unit, a piezoelectric actuator, and a mechanical structure having a time display unit;

a current time counting step to update sequentially using electromagnetic waves being received from the outside via an antenna current time information by the current time counter unit using the time information as a standard; and

a time display step to display the time information on the time display unit by the control unit driving the mechanical structure by the piezoelectric actuator on the basis of the current time information from the current time counter unit, the time display unit being operable while the electromagnetic waves are being received.

22. (Previously Presented) The timing device according to claim 10, further comprising an electric power source that is electrically connected to the communication unit

and the drive unit, the electric power source is configured to supply electric energy to the drive unit, wherein

the drive unit includes an operating unit to operate the time display unit, a standard oscillation signal source that is connected to the time display unit, and a timing IC.

23. (Previously Presented) The timing device according to claim 18, further comprising an electric power source that is electrically connected to the communication unit and the drive unit, the electric power source is configured to supply electric energy to the drive unit, wherein

the drive unit includes an operating unit to operate the time display unit, a standard oscillation signal source that is connected to the time display unit, and a timing IC.

24.-25. (Cancelled).

26. (Previously Presented) A timing device, comprising:
an antenna;
a communication unit being configured to communicate with an external communication device via said antenna and to send signals to a piezoelectric actuator;
a generator unit being provided with a generating coil, said generator unit being designed to convert kinetic energy into electric energy by utilizing electromagnetic induction;
a storage unit being configured to store electric energy; and
a mechanical structure having a rotor, said piezoelectric actuator, a time display unit being driven by said piezoelectric actuator and displaying time information, and an analog display device having analog pointers to display physical quantities,

said piezoelectric actuator being supplied with said electric energy from said storage unit, said piezoelectric actuator being configured to oscillate according to a signal from said communication unit, said piezoelectric actuator having,

an oscillating plate having a plate-shaped piezoelectric element and a reinforcing plate stacked on the piezoelectric element,
a contact section being provided on a longitudinal tip of said oscillating plate,
a support member, and
a holding section being configured to hold said oscillating plate on said support member.

27. (Cancelled).